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HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

SANTA ANA RIVER HYDROELECTRIC SYSTEM
SAN BERNARDINO NATIONAL FOREST
REDLANDS VICINITY
SAN BERNARDINO COUNTY
CALIFORNIA

HAER No. CA-130

David G. De Vries, photographer

October, 1991

Note: Photographs are organized to show system elements beginning at the upstream end and moving downstream. Lettered system components (HAER No. CA-130-A through CA-130-X) are also organized from upstream to downstream.

Photographs Nos. CA-130-1 through CA-130-45 are 8x10 inch enlargements from 4x5 inch negatives.

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| CA-130-1 | SANTA ANA RIVER, FREE FLOWING JUST ABOVE SAR-1 INTAKE AT DIVERSION DAM. VIEW TO NORTHEAST. |
| CA-130-2 | CINDER BLOCK SHED AT COTTAGE SITES JUST NORTH OF FISH SCREEN, SAR-1 INTAKE. VIEW TO NORTHWEST. |
| CA-130-3 | OVERVIEW OF SANTA ANA RIVER CANYON AND SAR-1, FROM ROAD TO HEADWORKS, LOOKING WEST-SOUTHWEST. |
| CA-130-4 | LOOKING DOWN ON COTTAGE SITE NEAR SAR-1, FROM ROAD TO FOREBAY. VIEW TO EAST. |
| CA-130-5 | RETAINING WALLS AT COTTAGE SITE NEAR SAR-1. VIEW TO NORTHEAST. |
| CA-130-6 | SAR-1, WITH ROOF OF MACHINE SHOP AT LOWER RIGHT, AND TAILRACE BEYOND. VIEW TO SOUTHEAST. |

SANTA ANA RIVER HYDROELECTRIC SYSTEM,
HAER No. CA-130
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- CA-130-9 ANOTHER VIEW OF SCRAPER. VIEW TO SOUTHWEST.
- CA-130-10 SAR-1 COMPLEX, LOOKING EAST, SHOWING POWERHOUSE AT LEFT AND STABLE AT RIGHT.
- CA-130-11 SAR-2, SHOWING OVERFLOW PIPE ALONGSIDE BURIED PENSTOCK. VIEW TO SOUTH-SOUTHEAST.
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- CA-130-16 COVERED SAR-3 INTAKE CHANNEL AND GAUGING STATION, LOOKING NORTH TO SAR-2.
- CA-130-17 LOOKING NORTHEAST TO SAR-2 FROM BED OF SANTA ANA RIVER.
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- CA-130-19 CADWALLADER GRAVE, BETWEEN SAR-2 AND SAR-3. VIEW TO EAST.
- CA-130-20 OVERVIEW OF SAR-3 COMPLEX, SHOWING FORMER RESIDENTIAL AREA, SAR-3 SWITCH RACK, MAINTENANCE YARD, AND GREENSPOT BRIDGE. NOTE ALSO LARGE PIPE CONDUCTING TAILRACE WATER INTO IRRIGATION SYSTEM. VIEW TO SOUTHWEST.
- CA-130-21 LOOKING WEST-SOUTHWEST DOWN PENSTOCK FROM SAR-3 FOREBAY.
- CA-130-22 SAR-3, SOUTH ELEVATION WITH PENSTOCK AND FOREBAY ABOVE, LOOKING NORTHEAST.
- CA-130-23 OVERVIEW OF SAR-3 AREA, SHOWING CORNER OF SAR-3 WITH TAILRACE, ADMINISTRATIVE OFFICE, TOILET SHED, AND RETAINING WALLS AT FORMER EMPLOYEE HOUSING SITE. VIEW TO SOUTHEAST. PANORAMA 1/2.
- CA-130-24 OVERVIEW OF SAR-3 AREA, SHOWING SWITCH RACK, SERVICE YARD, WAREHOUSE, CARPENTER SHOP, AND STORAGE SHED. VIEW TO SOUTH-SOUTHEAST. PANORAMA 2/2.
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- CA-130-26 GARAGE AND RETAINING WALLS NEAR SAR-3. NOTE SEVEN OAKS DAM ROAD CONSTRUCTION SCAR ON MOUNTAIN SIDE IN DISTANCE. VIEW TO NORTHWEST.
- CA-130-27 NORTH AND WEST ELEVATIONS OF WAREHOUSE (LEFT) AND CARPENTER SHOP (RIGHT) AT SAR-3 SERVICE YARD. VIEW TO SOUTHEAST.
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CA-130-29 OVERVIEW OF SAR-3 COMPLEX, LOOKING NORTHEAST. FROM LEFT TO RIGHT, THE STRUCTURES ARE THE SAR-3 POWERHOUSE, SWITCHRACK, OFFICE (IN BACKGROUND), WAREHOUSE, CARPENTER SHOP, MAINTENANCE YARD, STORAGE BUILDING, AND STORAGE GARAGE (IN BACKGROUND).

Note: Photographs Nos. CA-130-30 through CA-130-45 are 8x10 inch enlargements from 4x5 inch copy negatives of photographs curated at Southern California Edison Company (SCE), Rosemead, CA.

CA-130-30 HEADWORKS COTTAGE ABOVE SAR-1. EEC print no. S-C-01-00558, no date. Photographer unknown.

CA-130-31 SAR-1 FLOWLINE RAILWAY TRACK AND TUNNEL PORTAL. EEC print no. S-C-01-00527, no date. Photographer unknown.

CA-130-32 FORMER SANDBOX ABOVE SAR-1. NOTE SNOW AND LOG CABIN. EEC print no. S-C-01-00530, no date. Photographer unknown.

CA-130-33 SANDBOX ON SAR-1 FLUME. EEC print no. G-C-01-00077, no date. Photograph by Benjamin F. Pearson.

CA-130-34 FORMER SANDBOX ON SAR-1 FLOWLINE. EEC print no. S-C-01-00559 (print is marked "81" outside vignette frame), no date. Photographer unknown.

CA-130-35 SAR-1, OLD FOREBAY. SCE negative no. 72, no date. Photograph by G. Haven Bishop.

CA-130-36 SAR-1, OVERVIEW OF POWERHOUSE AND HOUSING AREA FROM ACROSS CANYON. EEC print no. G-C-01-00088, no date. Photograph by Benjamin F. Pearson.

CA-130-37 SAR-1, INCLINE RAILWAY FOR THE CONSTRUCTION OF THE PENSTOCK. EEC print no. S-C-01-00526, no date. Photographer unknown.

- CA-130-38 SAR-1, COTTAGE. EEC print no. S-C-01-00560, no date. Photographer unknown.
- CA-130-39 B.F. PEARSON, GENERAL SUPERINTENDANT, AT SAR-1. SCE negative no. 1038, June 6, 1912. Photograph by G. Haven Bishop.
- CA-130-40 SAR-1, CHIEF BUTTERFIELD AND OPERATORS. SCE negative no. 1039, June 6, 1912. Photograph by G. Haven Bishop.
- CA-130-41 SAR-2, GENERAL VIEW OF POWERHOUSE AND HOUSING AREA FROM THE NEW TRAIL ACROSS THE CANYON. SCE negative no. 4320, no date (but probably March 15, 1918: see HAER no. CA-130-44, no. 4321). Photograph by G. Haven Bishop.
- CA-130-42 SAR-2, OVERVIEW OF POWERHOUSE AND HOUSING AREA, LOOKING NORTH, SHOWING HORSE-DRAWN BUGGY. SCE negative no. 3, no date. Photograph by G. Haven Bishop.
- CA-130-43 Top photo: SAR-2, RESULTS OF STORM OF JANUARY, 1916; VIEW TO SOUTH FROM NEAR SOUTH END OF PLANT. NOTE SANTA ANA CANAL TUNNEL PORTAL. SCE negative no. 3505, January 28, 1916. Photograph by G. Haven Bishop.
- Lower photo: SAR-2, RESULTS OF STORM OF JANUARY, 1916; VIEW OF PLANT SITE FROM HIGH ON CANYON WALL. SCE negative no. 3506, January 28, 1916. Photograph by G. Haven Bishop.
- CA-130-44 SAR-3, GENERAL VIEW OF POWERHOUSE AND HOUSING AREA FROM THE NEW TRAIL ACROSS THE CANYON. SCE negative no. 4321, March 15, 1918. Photograph by G. Haven Bishop.
- CA-130-45 SAR-3, STORM DAMAGE FROM 1938 FLOOD. SCE negative no. 20682, March 16, 1938. Photograph by G. Haven Bishop.

Note: Photographs Nos. CA-130-46 through CA-130-56 are 8x10 inch contact prints from copy negatives of recent blue line prints from original engineering drawings curated at Southern California Edison Company (SCE), Rosemead, CA.

- CA-130-46 GENERAL MAP OF SANTA ANA NO. 3 PROJECT [MAP OF ALL THREE POWER HOUSE SYSTEMS], EXHIBIT J, JAN. 25, 1956. SCE drawing no. 535041 (sheet no. 1; for filing with Federal Power Commission).
- CA-130-47 PROJECT 2198, EXHIBIT G, SANTA ANA POWERHOUSE NO. 3 [GENERAL MAP]. SCE drawing no. 5187987, no date (FERC No. 2198-11).
- CA-130-48 MAP OF SANTA ANA RIVER POWER PLANT NO. 2 OF THE EDISON ELECTRIC CO. THROUGH UNSURVEYED LAND IN THE SAN BERNARDINO FOREST RESERVE, APPROVED MAY 26, 1904, F.C. FINKLE, CHIEF HYDRAULIC ENGINEER. SCE drawing no. 53988.
- CA-130-49 BEAR CREEK AND SANTA ANA RIVER DIVERSION DAMS AND CONCRETE CONDUIT NO. 1, PROJECT 1933, EXHIBIT F, SANTA ANA POWERHOUSE NO. 1. SCE drawing no. 5206851, no date (FERC no. 1933-41).
- CA-130-50 ROCK DROP AND FISH WHEEL, CONDUIT NO. 1 SPILLWAY, FLUME NO. 17, EXHIBIT L, SANTA ANA RIVER NO. 1 PROJECT, APR. 30, 1945. SCE drawing no. 523192 (sheet no. 2; for filing with the Federal Power Commission).
- CA-130-51 INTAKE AND POWER HOUSE AREAS, SANTA ANA NO. 1; DETAIL MAP OF SANTA ANA NO. 1 AND NO. 2 HYDROELECTRIC PROJECT, EXHIBIT K, APR. 30, 1945. SCE drawing no. 523690 (sheet no. 5; for filing with the Federal Power Commission).
- CA-130-52 POWER HOUSE AREA, SANTA ANA NO. 2; DETAIL MAP OF SANTA ANA NO. 1 AND NO. 2 HYDROELECTRIC PROJECT, EXHIBIT K, APR. 30, 1945. SCE drawing no. 523691 (sheet no. 6; for filing with the Federal Power Commission).

- CA-130-53 SIPHON NO. 1, SANTA ANA RIVER NO. 2 PROJECT, EXHIBIT L, PROJECT 1933, MAY 1973. SCE drawing no. 5110869 (sheet no. 11; for filing with Federal Power Commission).
- CA-130-54 ALDER CREEK DIVERSION, PROJECT 1933, EXHIBIT F, SANTA ANA POWERHOUSE NO. 2. SCE drawing no. 5206858, no date (FERC no. 1933-48).
- CA-130-55 GENERAL PLOT PLAN, S.A.R. NO. 3, APR. 27, 1922. SCE drawing no. 42993.
- CA-130-56 PLOT PLAN, AS PREPARED FOR PROPERTY DATA BOOK, SANTA ANA RIVER P.H. NO. 3, APR. 3, 1928. SCE drawing no. 48833.

OUTLINE FOR ARRANGEMENT
OF PHOTOGRAPHIC DOCUMENTATION

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Lettered system components are arranged from upstream to downstream.
as are groups of photographs within the "general" category.

<u>Group</u>	<u>Description</u>
General.	Overviews with multiple structures, maps & plans, etc.
A.	Santa Ana River diversion dam.
B.	Bear Creek diversion dam and confluence pool.
C.	Pipeline to fish screen.
D.	Fish screen.
E.	Flume and tunnel below fish screen.
F.	Sandbox at Breakneck Creek.
G.	Flumes and tunnels below sandbox.
H.	SAR-1 domestic water supply treatment house.
I.	SAR-1 forebay and penstock.
J.	SAR-1 powerhouse.
K.	SAR-1 stable.
L.	SAR-1 machine shop.
M.	SAR-1 powder magazine.
N.	Sandbox, SAR-1 bypass.
O.	SAR-2 intake.
P.	SAR-2 forebay and penstock.
Q.	SAR-2 powerhouse.
R.	Abandoned tunnel.
S.	Sandbox, SAR-3 flowline.
T.	Aqueduct.
U.	Warm Springs Canyon / SAR-3 Flumes.
V.	SAR-3 forebay and penstock.
W.	SAR-3 powerhouse.
X.	Transmission lines.